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Approved For Release 2003/04/29 : CIA-RDP84-00780R000200010018-2
CENTRAL INTELLIGENCE AGENCY
WASHINGTON 25, D.C.

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Equip & Supplies

10 June 1963

Dr. Gardiner H. Tucker
The Thomas J. Watson Research Center
Yorktown Heights, New York

Dear Gardiner:

We have studied your unsolicited proposal dated 6 October 1962 for providing the Agency with an automatic language processing system. It is an intriguing proposal which has evoked considerable Agency interest.

Our immediate concern is limited to acquiring an operational capability for (1) automatic transcription of Steno machine recording and (2) machine assisted Russian to English translation.

After reviewing proposals on automatic language processing, we have prepared a list of basic specifications and particular requirements (see Attachment). We invite the IBM Corporation to submit a proposal and estimates against these requirements in accordance with the outline contained in Section II of the attachment. Five (5) copies should be sent to the undersigned at the address indicated herein above.

May we have your response by 20 June? If additional information or clarification is required, please call me in Washington on Extension

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With best regards.

Sincerely

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Attachment

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CENTRAL INTELLIGENCE AGENCY
WASHINGTON 25, D.C.

10 June 1963

Dr. Gilbert W. King
Vice President and Director of Research
The Itek Corporation
10 Maguire Road
Lexington 73, Massachusetts

Dear Gil:

We have studied your unsolicited proposal dated 15 April 1963 for providing the Agency with an automatic language processing system. It is an intriguing proposal which has evoked considerable Agency interest.

Our immediate concern is limited to acquiring an operational capability for (1) automatic transcription of Steno machine recording and (2) machine assisted Russian to English translation.

After reviewing proposals on automatic language processing, we have prepared a list of basic specifications and particular requirements (see Attachment). We invite the Itek Corporation to submit a proposal and estimates against these requirements in accordance with the outline contained in Section II of the attachment. Five (5) copies should be sent to the undersigned at the address indicated herein above.

May we have your response by 20 June? If additional information or clarification is required, please call me in Washington on

[Redacted]

With best regards,

Sincerely,

[Redacted]

Attachment

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ATTACHMENT

10 June 1963

SECTION I

Specifications for an Automatic Language

Processing (ALP) System

A. Functional Requirement

1. This system is to perform in two functional modes: Mode I--Steno to English conversion, and Mode II--Russian to English translation.

a. In Mode I, (Stenocode), English language data will be recorded via Steno machines by Agency personnel. This process will simultaneously yield a punched tape. The ALP system will machine edit this tape (error correction), machine process the data, format the output to customer requirements, and print the end product on offset mats for duplication.

b. In Mode II, (MT mode), Russian language data will be recorded in machine language by Agency personnel via modified Flexwriters or similar equipment. Following machine processing the end product will be an English translation printed according to customer requirements.

2. Production rates at which the system must operate will equal or exceed:

- a. 65 words/second (English printout) in the Steno mode.

(We define a word as 6.8 characters, including spaces. The output must print on mats, for reproduction purposes, when operating in the Steno mode. To provide for the necessary margins on paper eight inches wide, the printing on each line will be limited to 6.8 inches. At ten characters per inch, a limitation of the 1403 printer, this is 68 characters per line. At 6.8 characters per word, this is ten words per line. The 1403 printer, modified to print upper and lower case characters, operates at a speed of 389 lines/minute. At ten words per line, this is 3890 words/minute or about 65 words/second.)

- b. Eight words/second (English printout) in the MF mode.

(This is the production speed of the AN/GSQ-16 Mark II.)

2. Output from the system must meet the following quality standards:

- a. The error rate must not exceed 0.3% (i.e., less than one wrong or missing word out of three hundred) in the machine printout when operating in the Steno mode. All errors to be "flagged" on the printout. Pages to be numbered.

- b. The quality of the MF must be at least equal to that provided by the AN/GSQ-16 Mark II System.

B. Hardware Requirement

1. Components of the ALP system will consist of the following items of equipment:

- a. Ten (10) Steno machines that produce punched paper tape. (Each machine to be a compact tape-generating device.)

b. Thirteen (13) Flexewriter (type) machines that produce punched paper tape, for recording Cyrillic characters (from Russian language documents).

c. One (1) punched paper tape reader which provides on-line input to the lexical processor at a rate of approximately 500 characters/second.

d. One (1) lexical processor (and the software) which translates from Steno to English at an effective (throughput) rate of at least 65 words/second and from Russian to English at eight words/second. (The capability must be provided for adding a magnetic tape writing unit on-line with the lexical processor.)

e. One (1) IBM 1403 printer with upper and lower case characters that prints (at least 60 characters per line) at a rate of 300 lines/minute on-line with the lexical processor.

C. Acceptance Requirement

1. After installation and prior to acceptance by the Agency, the system must be successfully tested as follows:

a. The Lexical Processor and input/output components must operate at least at the rate specified (para. A2) and provide the quality of output specified (para. A3) at least 90% of the time during three six-hour sessions, over a period of three days. There will be three hours of operation in the Steno mode and three hours in the RT mode during each

session. The source material will be supplied by the Agency. Agency personnel will record the data in machine language (via Steno machines and Flexowriter) ahead of time. Agency personnel will operate the Paper Tape Reader, Lexical Processor, and Printer during the test sessions.

SECTION II

Requested Response

A. Given the requirements contained in Section I above, the potential contractor is requested to provide the Agency with a written response no later than 20 June 1963 which will provide specific information and reactions to the following elements:

1. Work Schedule - The contractor is requested to provide a work schedule on a month-to-month basis for the 15 to 18 months' duration of the contract. This schedule is to describe the nature and extent of contractor work in connection with system design and preparation of hardware and software. Specific information should also be included in the schedule that will describe how much time and manpower the contractor is prepared to devote to this effort.

2. Training - A statement is requested from the contractor explaining his role in training Agency personnel in the operation of Steno machines and the ALP family of equipment; (e.g., will contractor supply operator and programmer manuals?)

3. Machine Translation Research - The contractor is requested to provide the Agency with a statement of his company's planned machine translation and Steno conversion research work which may lead to improved hardware and software. There should be a clear statement of the terms under which future improvements in this area, through research, will be available to the Agency. Also, what provisions will there be for upgrading dictionaries and programs, based on Agency experience?

4. Maintenance - A clear-cut statement is requested on the nature and cost of an equipment maintenance program planned by the contractor. This statement should include provision for the preparation of duplicate discs, replacement of discs, spare parts, labor, etc., for all purchased hardware.

5. Agency Obligations - The proposal should indicate all obligations that the contractor would place on the Agency to enable fulfillment of the contract. Requirements for the Agency to provide manpower; space, electrical power, air conditioning to accommodate the system, etc. should be stated.

6. Cost Estimates - Alternate estimates are requested for the cost of the total system on a (a) purchase basis (Both CFPF and Fixed Price) (b) lease basis, and (c) lease with option to buy. To this there should be added all other costs that are anticipated by the contractor in fulfilling services such as those described under paragraphs 1 to 4 above. Cost estimates should be submitted in detail on Form 633, Cost and Price Analysis.